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ABSTRACT

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Discourse — Completion as a Technique for Studying Lexical Features of Interlanguage

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Abstract

After a survey of current methods of studying lexical acquisition, none of which are really suitable for studying how specific words are acquired and used by adult learners and how such usage differs from that of native speakers, a method is proposed for the study of such qualitative aspects of second language lexical acquisition. Learners are required to fill in the blanks in short texts, or "discourses", which as far as possible are so constructed that there is only one lexical item which would be judged an appropriate filler by native speakers. The main advantages of this technique are that it can be used i) to test specific hypotheses about learners' interlanguage and ii) to compare different populations, including both learners and native speakers. Certain difficulties that arise in item construction and data analysis are also discussed in detail, particularly the problem of limiting both syntactic and situational possibilities, the significance of inappropriate responses, and the wording of questionnaire instructions.

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1. Introduction

Two aspects of second language (L2) lexical acquisition must be distinguished: quantitative and qualitative. "Quantitative" study is concerned to establish how many words are acquired, in what sequence, and at what rate. "Qualitative" study concentrates on specific words or lexical items, and investigates both how and when they are acquired and the stages by which the learner gains complete control of all shades of meaning. To date little work has been carried out of either kind; research on L2 acquisition has concentrated on grammar and phonology.

One reason for the lack of research in lexical acquisition may be the absence of contrastive lexical studies, which are probably a necessary precondition: "hardly anything of significance has been attempted in the differential comparison of vocabulary" (Lewis, 1974). The existence of bilingual dictionaries in no way contradicts this verdict. Though they may contain much of the necessary raw data, it is scattered by the whim of alphabetical order, and not systematically set forth by lexical sets, or semantic fields. Another reason for lack of research may be the shortage of suitable research instruments, designed for testing specific hypotheses about processes of lexical acquisition. Nearly all the research to date has been concerned with second language — or "interlanguage" — performance in general. Data about lexical usage, no matter how elicited, is often included in overall assessments of the level of second language proficiency, and not studied as an end in itself.

Our own research interests are both exclusively lexical and "qualitative". We are interested in how L2 learners use specific lexical items, and how such usage differs from native speakers' usage. Such an interest in specific items derives from error analysis of learners' "textual data". Insights into the reasons underlying learners' usage suggest specific hypotheses about processes of lexical acquisition. These hypotheses must then be tested by further study of learners' usage under controlled conditions.

The purpose of this article is to suggest an appropriate research technique which will provide such conditions for hypothesis testing; examples

of the kinds of hypotheses we have in mind are described below in section 2.1. However, before analysing in detail the merits and deficiencies of the research techniques we have been using, it seems appropriate to survey other research concerned with eliciting L2 performance in general and to consider how far the techniques used might be suitable to our own aims in studying lexical performance.

The data collection techniques used in previous studies of inter-language, whether used alone or in combination, can be divided into four main groups:

i) "pictorial clues", i. e. pictures used to elicit either oral responses (Dulay and Burt, 1974; Cohen, 1974), or written ones (Barik and Swain, 1975) or both (Bailey, Madden and Krashen, 1974).

ii) translation — from L1 to L2 as a test of grammatical competence (Taylor, 1975) or from L2 to L1 as a comprehension task and from L1 to L2 as a production task (Swain, Dumas and Naiman, 1974). Translation has also been used in combination with pictorial clues (Varadi, 1973) and as a device to ensure comprehension on a sentence completion task (Ickenroth, 1975).

iii) imitation — since psycholinguists claim that correct imitation of model sentences in the mother tongue involves both lexical and syntactic processing (Ervin-Tripp, 1970), it has also been used recently to study second language performance (Naiman, 1974; Markman, Spilka and Tucker, 1975).

iv) spontaneous speech — taped interviews have been used both for assessing second language proficiency at a given point in time (Selinker, Swain and Dumas, 1975) and as one of a series of data-collecting techniques in longitudinal studies (Cazden et al. 1975). A variation on this technique is the structured interview devised by Selinker (1969).

Pictorial cues are of course more appropriate for research with children than with adults; our own research population were largely university students. Both pictures and spontaneous speech also have the disadvantage, from our point of view, that they do not easily permit comparison of learners' with native speakers' usage. Individual differences of personality and imagination will produce a wide range of responses even to the same picture. Both pictorial cues and spontaneous speech may be useful for producing preliminary textual data, on which hypotheses about

lexical acquisition can be based. But for testing hypotheses about lexical acquisition and communication strategies, we need precise comparison of usage in identical or near-identical contexts. Such comparisons may occur in response to pictorial cues or in taped interviews, but they are not subject to experimental control.

For hypothesis testing the great drawback of spontaneous speech is that you cannot avoid avoidance. If the learner is free to express himself spontaneously in any way, and on any subject he chooses, he is also free to avoid all those aspects of lexical usage which most interest the experimenter. Only the most highly structured interview can provoke responses specific enough for the kind of research we are interested in.

Translation from the second language into the learner's mother tongue can supply data only about his level of comprehension. For information about his second language usage we need examples of his ability to translate from his mother tongue into the second language. The trouble with translation as a research technique is that it invites "transfer", or "interference". This is true for native speakers as well as learners of the target language; by no means all native speakers are capable of producing normal usage when asked to translate. For the second-language learner we can certainly learn what regular patterns of translation-equivalence he has set up, but this may tell us little about deviations from acceptable usage.

About imitation there is little to be said. It has not hitherto been used for research specifically directed to studying lexical acquisition. And it is not clear precisely how relevant it is for comparing the behaviour of learners and native speakers.

There is a fifth approach to L2 lexical acquisition which deserves consideration: the use of what we prefer to call "discourse-completion", one variety of those controlled elicitation procedures which have been described as "experimental methods whereby grammatical and semantic inquiry can be put on a satisfying objective basis" (Greenbaum and Quirk, 1970: 1). In two recent articles we have discussed specific aspects of the acquisition of Hebrew vocabulary (Levenston and Blum, 1977; Blum and Levenston, 1977) where the relevant data were obtained through techniques of elicitation. The purpose of the current article is to analyse in detail the advantages and disadvantages of these techniques. Our hope is that a better understanding of the practical difficulties of studying vocabulary acquisition — by which we mean both the words learnt and the uses and meanings attached to them at any given stage of the learning process — will encourage more scholars to try their hand at investigating this vital but neglected area of L2 acquisition.

2. Discourse-Completion

Essentially we used discourse completion exercises, what Quirk and Greenbaum call "composition tests". The subjects, both learners and native speakers, were presented with a series of minimal discourses — usually a single sentence, but occasionally two sentences. The term "discourse" is used here to refer to a coherent stretch of speech or writing which contains enough information to enable the reader to supply the situational context in which it took place. "Sentence-completion", a more familiar term from language teaching and testing, would not be appropriate; we are not concerned with the grammatical or orthographic properties of the sentence, and not limited to one sentence per item. And neither "text" nor "utterance" — possible alternatives to "discourse" — suggest the degree of coherence and potential contextualization which are a necessary feature of each item. In each discourse, then, there was a blank to be completed. The instructions were to fill the blank with one word, the first that came to mind. And the discourses were designed to restrict as far as possible the number of acceptable alternatives; in the ideal discourse there would be only one word which a native speaker would be likely to supply.

2.1. Advantages

This brings us to the first two advantages of the method:

Advantage 1 — Testing specific hypotheses

In our two previous articles we have discussed the ways in which a speaker's first language semantic competence is relevant to his L2 lexical acquisition. In particular we have examined the relevance of his control of hyponymy, synonymy, converseness, and register distinctions. The various hypotheses were tested with reference to those specific words for which the sentence completion exercises were devised.

It was postulated, for instance, that where there were two words for a particular concept, one register-restricted and the other unmarked for register, the learner would first acquire the unmarked term, usually taught first, and use it in all contexts, even though he may demonstrate passive recognition knowledge of the marked term. This was tested for Hebrew rahac ("wash" — unmarked) and natal ("wash" — religious register, i.e., as a ritual act), with a sentence whose English translation was as follows:

According to Jewish tradition, one must _____ one's hands before a meal.

The data supported the hypotheses — 85% of the native speakers used the marked form, whereas among the learners who knew both words only 38.2% used the marked natal and 60% preferred the unmarked rahac.

Advantage 2 — Comparing different populations

The most important comparison is between the usage of native speakers of a language and that of learners. And the need to establish native usage is not a luxury; the precision and status labelling of dictionary entries may obscure the vagueness and indeterminacy with which language is actually used. We must therefore check our hunches about the "only word acceptable" to native speakers by means of empirical experiment. Although for example, the majority of native speakers of Hebrew did use natal in the above sentence, and comparison with learners' usage was therefore demonstrably valid, we were surprised to find as high a proportion as 12.5% of native speakers using rahac.

Other populations can also be compared by the same questionnaire. In fact, it may be possible — by extensive testing of different kinds of native speakers — to find out what the factors are that lead to the kind of register insensitivity displayed by the aforementioned 12.5%. We have recently tried administering our original questionnaire to culturally disadvantaged Hebrew-speaking children; preliminary results indicate that they are not insensitive to register distinctions. Similarly, one can compare the results of learners at different stages — either the same learners at different points in time, or different learners at the same point in time — and gain some understanding of the chronological development of lexical acquisition.

It should also be noted that the initial testing of all discourses on native speakers is mandatory. Failure by native speakers to agree on a single most acceptable word indicates the need to refine (or reject) the discourse before using it to test learners' behaviour.

Advantage 3 — Ease of analysis and administration

A written questionnaire, consisting of 20 minimal discourses, can be speedily administered to large numbers of subjects — especially university students during or between lectures — in a matter of minutes. No special skills are required of the research assistant charged with supervising the administration. And results can be speedily tabulated. For each discourse there may be a variety of answers, including those forecast by the hypotheses.

The number of occurrences of each answer provides immediate evidence of the direction in which the research is heading. The frequency with which expected answers occur will confirm or disconfirm the hypotheses. And each unexpected answer, however infrequent, provided by a learner provides further food for thought about second language communication strategies that use lexis.

Advantage 4 — Use with other tests

In our own research we have been using the discourse-completion "composition" tests, in coordination with a simple translation test. Those subjects who are being studied for their use and knowledge of a second language are asked to translate into their mother tongue a list of items, including all those which prior research has shown most likely to be used in the composition tests by native speakers. Comparison can then be made between the learners passive/recognition knowledge of vocabulary — as revealed by his ability to recognize and translate items out of context — and his active/production knowledge — as revealed by his ability to recall the same items, when known passively, for use in appropriate contexts.

It would also be interesting to compare the results of the written composition tests with data obtained from an oral version of the same discourse-completion exercise. We have assumed hitherto that the test is a "projective" measure, i.e., that what subjects do write is a reliable indicator of what they would say. But oral production can be tested directly. We could let subjects hear the incomplete sentence and ask them to utter the missing word. It might prove necessary to redesign each discourse in such a way that the missing item always occurred in final position, though this might limit the items which could be tested. In all other respects the initial hypotheses and experimental procedures would remain unchanged. The translation test could also be administered orally. The only reason for preferring a written version of the test is that it is much less bother.

Advantage 5 — Degree of contextual control

The most obvious yet perhaps the greatest advantage of discourse-completion is the degree of contextual control it gives the experimenter. "Contextual" is used here to refer to the linguistic context, or, more precisely, to the situation implied by the lexical material contained in the discourse. The greater the extent to which this implied situation is restricted and defined, the greater the constraints upon linguistic choice available when any given lexical item is deleted. (See example 3 below, and the suggested emendation.) In our own research we have striven for maximum contextual

restriction, in order to test usage of specific lexical items. It is also possible, by relaxing the degree of contextual control in a particular discourse, to test usage in areas of vocabulary. In either case, prior testing with native speakers will indicate the level of contextual constraint achieved and the range of acceptable responses.

3. Difficulties

In designing discourse-completion tests and interpreting the results we have encountered a number of difficulties, some expected but some totally unexpected. It seems useful, therefore, to list some of the lessons we have learned about research procedure. We have not solved all the problems, but we can warn intending experimenters of the difficulties they are bound to run into.

a. Discourse design

Firstly, each discourse must be carefully designed so that only one grammatical structure or "part of speech" is syntactically admissible in the context. Otherwise, hypotheses concerning specific words that are not used as more than one part of speech cannot be tested. And most vocabulary items are probably restricted to single parts of speech. The following discourse is an example of an unsatisfactory item; as the suggested completions show, it may be completed by either an adjective or the continuous tense of a verb.

1) He wants to leave Israel. He can't find a good job, and he has no friends. In short, I don't think he's _____ here.
happy/staying

Secondly, it must be unambiguously clear what time and tense relationships affect the choice of the test item. The following example illustrates the range of possibilities that may unfortunately become available if time and tense are not controlled.

2) They gave him a good job. He _____ a lot of money.
likes/needed/will earn

Thirdly, the context must be specified in sufficient detail to limit the referential and conceptual possibilities of the test-item within the desired limits:

3) When he heard that he was the father of a son, he was very _____ happy/upset.

Such a discourse might well be improved by inserting the phrase "after six daughters".

Finally, as pointed out in advantage 5, the smaller the number of acceptable lexical items the discourse is designed to elicit, the more important these parameters — grammatical, situational and referential — become. If, for example, you are interested in semantic fields rather than specific items, then it does not matter if there is not such strict control of the grammatical environment.

b. Inappropriate responses

No matter how precise the instructions given when administering the test, there will always be some responses which make very little sense because subjects ignore some aspects of the instructions. In our experience this is true, in varying degrees, of both native speakers and second-language learners. Both are capable of misreading, no matter how long or short the discourse.

4) otan > itan

(them > with them)

Misreading 'otan' for 'itan' simply because the letters look alike in Hebrew, gave subjects a whole new range of lexical possibilities we of course never thought of.

Both are liable to ignore grammatical constraints, no matter how carefully the discourse is designed.

5) He was ready to accept the responsibility that had been _____ upon him.
given/placed

Second language learners — though not native speakers — do not always consider the implications of the total discourse, particularly when it consists of more than one sentence. The word they supply may be acceptable in the context of the sentence in which it occurs, but make little sense if the total discourse is taken into consideration. We are not sure why this occurs. It may result from the general artificiality of the combined sentences, or it may

stem from a tendency by second language learners to simplify the test situations in which they find themselves.

6) They gave him a good job. He _____ a lot of money.
earned/spent/found

The same phenomenon may also occur with discourses consisting of a single sentence, where the learner simply ignores whole sections of the sentence.

7) They expelled him from the university because he
_____ in all the exams.
failed/succeeded

None of these inappropriate responses mars the general usefulness of discourse-completion in lexical acquisition research; most subjects do respond more or less along the lines predicted. It is clearly impossible, however, to achieve 100% relevant responses. When a discourse was designed to elicit a specific word from native speakers, we reckoned agreement by 75% as satisfactory. With anything less than 75% we blamed the discourse, not the subjects. But the figure was purely arbitrary; more research is needed to establish accurately the correct cut-off point between appropriate and inappropriate responses.

c. Other appropriate responses

The last paragraph should not be misunderstood. We are not suggesting that up to 25% of our subjects regularly provided inappropriate responses. Those responses, especially from native speakers, which failed to confirm our hypotheses were normally appropriate to the discourse. Some degree of acceptable synonymy is difficult to avoid when you are working with minimal discourses. And as pointed out above (see Advantage 2) some subjects do not show sensitivity to register distinctions in their first language, if the findings of our tests are to be trusted.

d. Questionnaire instructions

As with any research based on the completion of written questionnaires, the precise phrasing of the instructions is probably of vital importance. Do you ask the subject to write down what he "would say", what he "would write", or just the first word that "comes to mind"? How far can our results, elicited by the last of these formulae, be projected to the situations embodied in the

first two? This is itself a subject for research, using different instructions for the same test items with matched groups of subjects.

Incidentally, no matter how precisely you word the instructions or orally brief the subjects, there will always be some who fail to do as requested. Many of our second-language learners — though fewer native speakers — ignored the restriction to single words, and filled the gaps with more than one word. If, however, we had been interested in lexical areas rather than lexical items, even these responses would have been relevant.

3. In Conclusion

This article has stressed the value of discourse-completion designed to elicit unique single-word responses. These are most useful for confirming specific hypotheses about strategies of lexical acquisition. It is important, however, to realize that every appropriate response, predicted or not, has something to tell us about learning strategies. Among the data there is very little dross.

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